PATENT
270/234
18721-7053

CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))

[X] I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date indicated below with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit: 3/4/03

Signature of Person Certifying: Carolyn Tobias
Printed Name: Carolyn Tobias

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Yoshihiro Takai et al.

Serial No.: 10/037,477

Filed: January 2, 2002

For: METHOD AND APPARATUS FOR IRRADIATING A TARGET

Group Art Unit: 2882

Examiner: Not yet assigned

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with 37 CFR §§ 1.97 and 1.98, the items identified in this Information Disclosure Statement ("IDS") are brought to the attention of the Office. The items are listed on the attached form PTO/SB/08A. Copies of the items listed are enclosed herewith.

The items identified in this IDS may or may not be "material" pursuant to 37 CFR § 1.56. The submission thereof by Applicants is not to be construed as an admission that any such patent, publication or other information referred to therein is material or considered to be material (37 CFR § 1.97(h)), or even qualifies as "prior art" under 35 USC § 102 with respect to this invention unless specifically designated by Applicants as such.

INFORMATION DISCLOSURE STATEMENT FILING PROVISION:

☒ This IDS is believed to be timely in that it is being submitted under 37 CFR § 1.97(b), that is (1) within three months of the filing date of the application, which is not a continued prosecution application filed under § 1.53(d) or (2) within three months of entry of the national stage as set forth in 37 CFR § 1.491; or (3) before the mailing of a first Office action on the merits; or (4) before the mailing of a first Office action after filing a request for continued examination under § 1.114. Thus, no fee is required.

☒ However, if the undersigned is in error in this regard, Applicant respectfully requests that the Office consider this IDS as filed under 37 CFR § 1.97(c), if applicable, and charge the fee due under 37 CFR §1.17(p) to the deposit account referenced below.

☐ However, if the undersigned is in error in this regard, Applicant respectfully requests that the Office consider this IDS as filed under 37 CFR § 1.97(c), if applicable, and a statement under 37 CFR § 1.97(e) is included below, thus no fee is required.

☐ This IDS is being submitted under 37 CFR § 1.97(c), that is after mailing of a first Office Action on the merits, but before a Final Action under 37 CFR § 1.113 or a Notice of Allowance under 37 CFR § 1.311.

☐ The fee due under 37 CFR § 1.17(p) is submitted herewith.

☐ A statement under 37 CFR § 1.97(e) is included below, thus no fee is required. In the event that this IDS is not received before a Final Action or a Notice of Allowance, then Applicant respectfully requests that the Office consider the filing of these papers to be submitted under 37 CFR § 1.97(d) and charge the fee due under 37 CFR § 1.17(p) to the deposit account below.

☐ This IDS is being submitted under 37 CFR § 1.97(d), that is after a Final Action under 37 CFR § 1.113 or a Notice of Allowance under 37 CFR § 1.311, but before payment of the issue fee. A statement under 37 CFR § 1.97(e) is included below. The fee due under 37 CFR § 1.17(p) is submitted herewith.

☐ This IDS is being submitted under 37 CFR § 1.97(i), that is after a Final Action under 37 CFR § 1.113 or a Notice of Allowance under 37 CFR § 1.311, but before payment of the issue fee.

STATEMENT UNDER 37 CFR § 1.97(e):

☐ Each item contained in this IDS was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS.

☐ No item contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this statement after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this IDS.

PAYMENT AND/OR AUTHORIZATION TO CHARGE FEES:

☐ A check in the amount of ____ is enclosed for the above fee(s).

☒ The Commissioner is authorized to credit any overpayment and to charge any underpayment to Bingham McCutchen's Deposit Account No. 50-2518, referencing billing No. 18721-7053, for any fees required by the filing of these papers.

Respectfully submitted,

Dated: 3/4/03

By: Gerald Chan

Gerald Chan
Reg. No. 51,541

BINGHAM McCUTCHEN LLP
Three Embarcadero, Suite 1800
San Francisco, CA 94111-4067
Telephone: (650) 849-4904
Telefax: (650) 849-4800

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SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 3

Complete if Known	
Application Number	10/037,477
Filing Date	January 2, 2002
First Named Inventor	Yoshihiro Takai
Art Unit	2882
Examiner Name	Not yet assigned
Attorney Docket No.	270/234; 18721-7053

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher city and/or country where published	
	1	Balter, J. M. et al., "Daily targeting of intrahepatic tumors for radiotherapy," *Int J Radiat Oncol Biol Phys*, 2002, Jan 1;52(1), pp. 266-71	
	2	Cho, P.S. et al. "Cone-beam CT for radiotherapy applications," *Phys Med Biol* 1995;40: pp. 1863–1883.	
	3	Drake, D.G. et al. "Characterization of a fluoroscopic imaging system for kilovoltage and megavoltage radiography," *Med Phys* 2000;27: pp. 898–905.	
	4	Fahrig, R. et al., "Three-dimensional computed tomographic reconstruction using a C-arm mounted XRII: Imagebased correction of gantry motion non-idealities," *Med Phys* 2000;27:30–38.	
	5	Feldkamp, L.A. et al. "Practical cone-beam algorithm," *J Opt Soc Am A* 1984;1: pp. 612–619.	
	6	Groh, B.A. et al. " A performance comparison of flat-panel imager-based MV and kV conebeam CT," *Med Phys* 2002;29: pp. 967–975.	
	7	Jaffray, D.A. et al. " A radiographic and tomographic imaging system integrated into a medical linear accelerator for localization of bone and soft-tissue targets," *Int J Radiat Oncol Biol Phys* 1999;45: pp. 773–789.	
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	9	Keall, P. J. et al., "[Abstract] Motion Adaptive X-ray Therapy: A feasibility study," *3rd Annual IMRT Symposium ABSTRACTS*, Chicago 2000 World Congress, July 24, 2000, Sheraton Chicago, Chicago, Illinois.	
	10	Keall, P. J. et al., "[Presentation] Motion Adaptive X-Ray Therapy: A Feasibility Study," Medical College of Virginia Hospitals, Virginia Commonwealth University.	
	11	Midgley, S., et al. "A feasibility study for megavoltage cone beam CT using commercial EPID," *Phys Med Biol* 1998;43: pp. 155–169.	

Examiner's Signature		Date Considered	

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

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Sheet 3 of 3

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	12	Mosleh-Shirazi, M.A. et al. "A cone-beam megavoltage CT scanner for treatment verification in conformal radiotherapy," *Radiother Oncol* 1998; 48: pp. 319–328.	
	13	Nakagawa, K. et al. "Megavoltage CT-assisted stereotactic radiosurgery for thoracic tumors: Original research in the treatment of thoracic neoplasms," *Int J Radiat Oncol Biol Phys* 2000; pp. 48:449–457.	
	14	Pisani, L. et al. "Setup error in radiotherapy: On-line correction using electronic kilovoltage and megavoltage radiographs," *Int J Radiat Oncol Biol Phys* 2000; 47: pp. 825–839.	
	15	Ruchala, K.J. et al. "Megavoltage CT on a tomotherapy system," *Phys Med Biol* 1999; 44: pp. 2597–2621.	
	16	Siewerdsen, J.H. et al. "Cone-beam computed tomography with a flat-panel imager: Magnitude and effects of x-ray scatter," *Med Phys* 2001;28: pp. 220–231.	
	17	Siewerdsen, J.H., et al. "Optimization of x-ray imaging geometry (with specific application to flat-panel cone-beam computed tomography)," *Med Phys* 2000;27: pp. 1903–1914.	
	18	Swindell, W. et al., "Computed tomography with a linear accelerator with radiotherapy application," *Med Phys*, 10, pp. 416-420.	
	19	Uematsu, M. et al. "A dual computed tomography linear accelerator unit for stereotactic radiation therapy: A new approach without cranially fixated stereotactic frames," *Int J Radiat Oncol Biol Phys* 1998;35: pp. 587–592.	
	20	Uematsu, M. et al. "Intrafractional tumor position stability during computed tomography (CT)-guided frameless stereotactic radiation therapy for lung or liver cancers with a fusion of CT and linear accelerator (FOCAL) unit," *Int J Radiat Oncol Biol Phys* 2000;48: pp.443–448.	

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